

**ABSTRACT**

- 5 A process for preparing particles of zinc sulfide-based electroluminescent phosphor having a moisture resistant coating thereon which comprises the steps of selecting a reaction vessel having a given height and a porous disc at the bottom thereof; charging the reaction vessel with phosphor particles and fluidizing the particles by introducing an inert gas into the vessel through the porous disc; heating the reaction vessel to a reaction temperature; introducing a  
10 coating precursor into the reaction vessel at a position adjacent the bottom of the vessel but above the disc; introducing a co-reactant into the reaction vessel at a position substantially mid-way of the given height; and maintaining the inert gas flow, the precursor flow and the co-reactant flow for a time sufficient for a reaction to occur and coat the phosphor with the moisture resistant coating. Apparatus for carrying out the process is also disclosed.
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